

1 **WHAT IS CLAIMED IS:**

2 1. A pneumatic sanding machine comprising:

3 a body comprising

4 a motor frame having

5 an annular portion having an exterior periphery and an

6 inner space with a top opening and a bottom opening;

7 an upper protrusion formed integrally on and extending

8 from the exterior periphery of the annular portion and having a front formed

9 integrally on the exterior periphery of the annular portion, a rear, two opposite

10 sides, an intake air port and buffering chamber defined respectively in the rear of

11 the upper protrusion, an intake air passage communicating with both the intake

12 air port and the inner space of the annular portion, an exhausted air passage

13 communicating with both the buffering chamber and the inner space of the

14 annular portion, a valve chamber defined transversally in one of the sides of the

15 upper protrusion to interconnect the exhausted air passage with the buffering

16 chamber, a side bore defined in the other side of the upper protrusion and

17 communicating with the valve chamber and a connecting passage defined

18 longitudinally in the valve chamber and having a bottom opening that

19 communicates with the bottom opening of the inner space; and

20 a lower protrusion formed integrally on the exterior

21 periphery of the annular portion and having an air exhausting passage

22 communicating with the inner space of the annular portion;

23 an elbow connection fitting fitted into and held in the bottom

24 opening of the connecting passage and having an air outlet facing the lower

1 protrusion and aligned with the air exhausting passage of the lower protrusion;
2 a bottom annular cover mounted to the annular portion of the
3 motor frame; and
4 a top cap covering the top opening of the inner space;
5 a pneumatic motor assembly mounted and held partially in the inner
6 space in the motor frame and comprising
7 a sanding pad having a top and multiple powder sucking holes
8 defined through the top and covered by the bottom annular cover;
9 a shaft extending upwardly from the top of the sanding pad;
10 a pneumatic motor held in the inner space of the annular portion
11 and having
12 a stator mounted and held in the inner space in the motor
13 frame and having a top, a bottom, a rotor space, an air inlet aligned and
14 communicating with the intake air passage and an air outlet communicating with
15 the exhausted air passage; and
16 a rotor rotatably mounted in the rotor space of the stator
17 and connecting to the shaft for rotating the shaft; and
18 a control valve with a first end and a second end detachably received in
19 the valve chamber and comprising a first portion that covers and closes
20 selectively the connecting passage and the air exhausting passage of the lower
21 protrusion, a second portion and a neck portion interconnecting the first portion
22 with the second portion.

23 2. The pneumatic sanding machine as claimed in claim 1, wherein the
24 first portion of the control valve further has an inclined surface facing the second

1 portion, and the first portion forms an elongated covering protrusion that
2 selectively covers the connecting passage and the air exhausting passage.

3 3. The pneumatic sanding machine as claimed in claim 2, wherein the
4 body further comprises a chamber cover with multiple through holes and
5 mounted to the rear of the upper protrusion to cover the buffering chamber.

6 4. The pneumatic sanding machine as claimed in claim 1, wherein the
7 body further comprises a switch assembly attached outside to the upper
8 protrusion and comprising a pneumatic switch interconnecting the intake air port
9 with the intake air passage and a lever pivotally mounted on the upper protrusion,
10 whereby when the lever is pressed, the pneumatic switch is actuated to allow
11 compressed air to enter the intake air passage through the intake air port.

12 5. The pneumatic sanding machine as claimed in claim 3, wherein the
13 body further comprises a switch assembly attached outside to the upper
14 protrusion and comprising a pneumatic switch interconnecting the intake air port
15 with the intake air passage and a lever pivotally mounted on the upper protrusion,
16 whereby when the lever is pressed, the pneumatic switch is actuated to allow
17 compressed air to enter the intake air passage through the intake air port.

18 6. The pneumatic sanding machine as claimed in claim 5, wherein the
19 body further comprises an intake air connection fitting fitted and held in the
20 intake air port of the upper protrusion and a vacuum connection fitting fitted and
21 held in the air exhausting passage of the lower protrusion.

22 7. The pneumatic sanding machine as claimed in claim 6, wherein the
23 upper protrusion further has a pin hole communicating with the valve chamber;

24 the first and the second portions further have respectively a positioning

- 1 hole selectively corresponding to the pin hole; and
- 2 the body further comprises a pin held in the pin hole and extending out
- 3 of the pin hole to selectively engage and be held in one of the positioning holes to
- 4 hold the control valve in position.